

# PATENT COOPERATION TREATY

## PCT


### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 28 DEC 2005

WIPO PCT

Applicant's or agent's file reference A4-233PCT	<b>FOR FURTHER ACTION</b> See Form PCT/PEA/416	
International application No. PCT/US2004/038936	International filing date (day/month/year) 19.11.2004	Priority date (day/month/year) 20.11.2003
International Patent Classification (IPC) or national classification and IPC H01Q1/24		
Applicant MOLEX INCORPORATED et al.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 10 sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (Indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand  17.06.2005	Date of completion of this report  28.12.2005	
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Marot-Lassauzaie, J  Telephone No. +49 89 2399-2671	



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/US2004/038936

**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
    - ☐ international search (under Rules 12.3 and 23.1(b))
    - ☐ publication of the international application (under Rule 12.4)
    - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

**Description, Pages**

1-10 as originally filed

**Claims, Numbers**

1-37 received on 21.09.2005

**Drawings, Sheets**

1/13-13/13 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/US2004/038936

---

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

---

**1. Statement**

Novelty (N)	Yes: Claims	
	No: Claims	1-36
Inventive step (IS)	Yes: Claims	
	No: Claims	1-36
Industrial applicability (IA)	Yes: Claims	1-36
	No: Claims	

**2. Citations and explanations (Rule 70.7):**

**see separate sheet**

---

**Box No. VIII Certain observations on the international application**

---

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(SEPARATE SHEET)**

International application No.

**PCT/US2004/038936**

**Re Item V.**

- 1 Reference is made to the following documents:  
D1 : US 2003/129950 A1 (KWAK MIN-WOO) 10 July 2003 (2003-07-10)  
D2 : US 2002/084938 A1 (KIM SEONG-YUN) 4 July 2002 (2002-07-04)
- 2 The application is, in substance, directed to a flip phone with an antenna constructed around the hinge. A tuning part is connected to the antenna in the closed position. The claims are directed to the construction of the contacts of the tuning part around the hinge. Claims 1-5, 8-12, 14-15, 18-22, 25, 28-31 and 34 are directed to the construction of the hinge in general, while claims 6,13,16,23,26,32,35 specify a capacitive coupling and claims 7, 17, 24, 27, 33, 36 specify a projection (sliding contact) is used.  
Generally speaking, flip phones connecting a tuning device to their antenna according to the position of the hinge are known from either D1 or D2. Therefore claims 1-5, 8-12, 14-15, 18-22, 25, 28-31 and 34 lack novelty (Article 33(2) PCT). Additionally, document D1 discloses a flip phone with capacitive connection 120, 121 for an antenna 122a and an antenna extension (tuning part) 124. Therefore claims 6,13,16,23,26,32,35 lack novelty over this document (Article 33(2) PCT). As to document D2, this prior art describes projecting contacts 22, therefore claims 7, 17, 24, 27, 33, 36 lack novelty over this document (Article 33(2) PCT). claim is not new (Article 33(2) PCT).

**Re Item VIII.**

1. Although claims 1, 9, 19 and 28 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.
2. It is clear from the description that the actual design of the antenna is different than

**INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(SEPARATE SHEET)**

International application No.

**PCT/US2004/038936**

the one of either D1 or D2. In particular, neither in D1 nor in D2 is the tuning part in the shaft of the flip phone. The actual design of the antenna is also different (the application appears to use a meander antenna, which is almost entirely contained around the hinge). The examiner is of the opinion that these features are actually the ones that best define the invention. Since the independent claims do not contain these features they do not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

Amending the claims to specify these essential features would solve the objection of lack of novelty raised under Item V at the same time.